



Payload 3 Daily Flight Report



Date: 2025-09-19

Flight Campaign ID: P3C1

Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO

Aircraft: N821AR

Domain: 00 (Training & Calibration)

Sites Flown: H10C (NEON Headquarters Lidar Test - Riegl), W10C (Wiggle Timing Test - Riegl), B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)

Days left in Domain: 4

Report Author: Matt

Lidar Operators: Matt

Spectrometer Operators: Mitch

Pilots: Greg, Vince

Ground Crew: Nick

Flight Hours: 02:52

Hours until maintenance: 40.75

GPS Instruments: AOP_KBDU, S-COGY

Summary

The crew got airborne this morning and completed the Boresight, HQ Lidar validation and the Wiggle timing test.

Concerns

None.

Comments

None.

Daily Coverage

Estimated Cloud Cover Key

| | | |
|--------|---------|------|
| Green: | Yellow: | Red: |
| 0-10% | 11-50% | >50% |

Solar Angle Less Than 40 degrees: (*)

D00|H10C

| Line # | 1 | 2 | 3 | 4 |
|--------------|---|---|---|---|
| Lidar | ✓ | ✓ | ✓ | ✓ |
| Spectrometer | ✓ | ✓ | ✓ | ✓ |
| Camera | ✓ | ✓ | ✓ | ✓ |
| Cloud Cover | | | | |

Total number of lines flown: 4

D00|W10C

| | | |
|--------------|---|---|
| Line # | 1 | 2 |
| Lidar | ✓ | ✓ |
| Spectrometer | ✓ | ✓ |
| Camera | ✓ | ✓ |
| Cloud Cover | | |

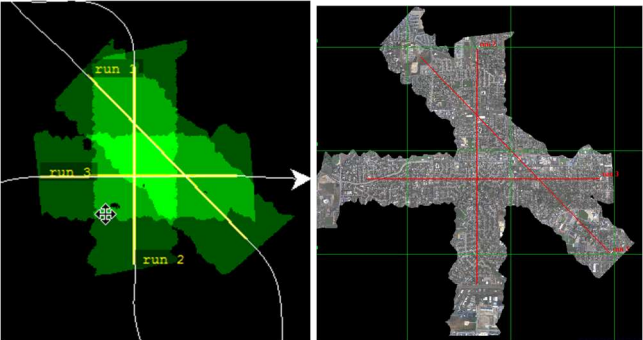
Total number of lines flown: 2

D00|B10E

| | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Line # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Lidar | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Spectrometer | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Camera | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cloud Cover | | | | | | | | | | | | | | | | | | | | |

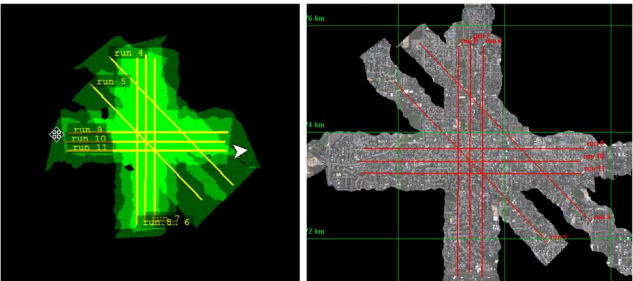
Total number of lines flown: 20

Flight Screenshots



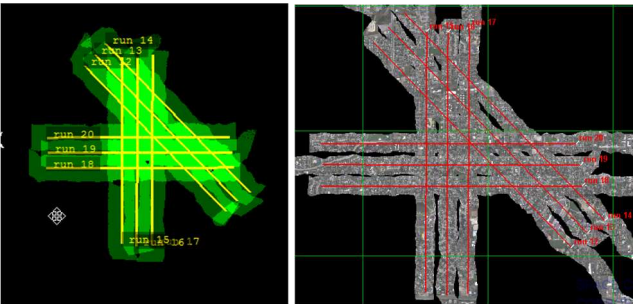
Lidar 1600m

NIS 1600m



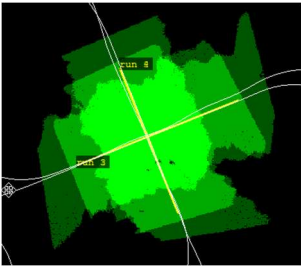
Lidar 1000m

NIS 1000m



Lidar 500m

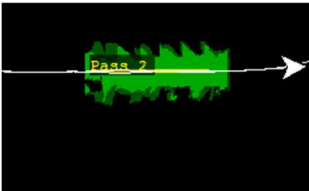
NIS 500m



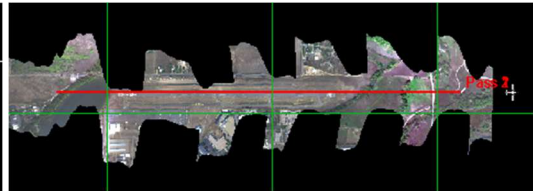
Lidar H10C



NIS H10C



Lidar W10C



NIS W10C

Cumulative Domain Coverage

D00|B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|

Flown: 100% (20/20)
 Green: 0% (0/20)
 Yellow: 100% (20/20)
 Red: 0% (0/20)
 * Flown within 35deg solar angle

D00|H10C (NEON Headquarters Lidar Test - Riegl)

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

Flown: 100% (4/4)
 Green: 0% (0/4)
 Yellow: 0% (0/4)
 Red: 10% (4/4)
 * Flown within 35deg solar angle

D00|N10D (Nominal Runway at KBDU - Riegl)

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | | | | | | | | | | | | |

Flown: 0% (0/28)
 Green: 0% (0/28)
 Yellow: 0% (0/28)
 Red: 0% (0/28)
 * Flown within 35deg solar angle

D00|O10B (NIS Offset - Riegl)

| | |
|---|---|
| 1 | 2 |
|---|---|

Flown: 0% (0/2)
 Green: 0% (0/2)
 Yellow: 0% (0/2)
 Red: 0% (0/2)
 * Flown within 35deg solar angle

D00|R10D (Boulder Airport Radiometric Calibration)

1 2 3 4 5

Flown: 100% (5/5)

Green: 100% (5/5)

Yellow: 0% (0/5)

Red: 0% (0/5)

* Flown within 35deg solar angle

D00|W10C (Wiggle Timing Test - Riegl)

1 2

Flown: 100% (2/2)

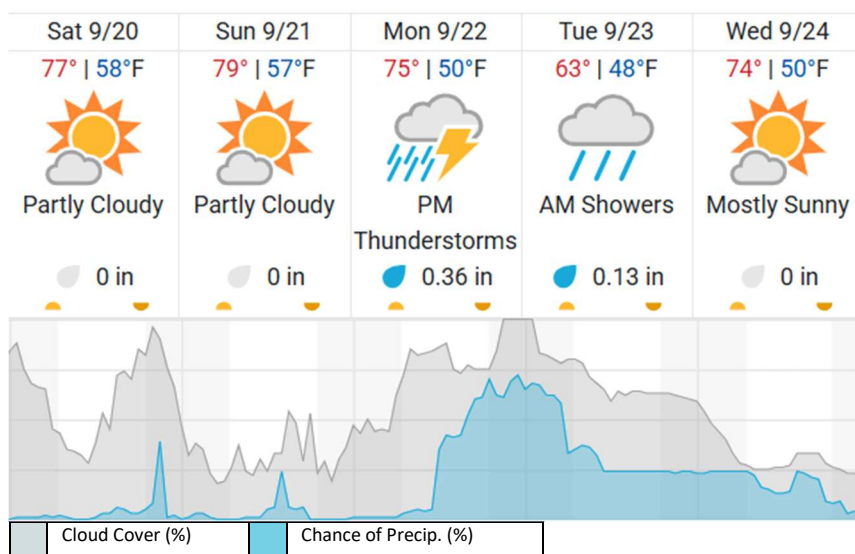
Green: 0% (0/2)

Yellow: 0% (0/2)

Red: 100% (2/2)

* Flown within 35deg solar angle

Weather Forecast



source: wunderground.com

Flight Collection Plan for 20 September 2025

Flyority 1

Collection Area: Boresight Calibration – Greeley, CO

Flight Plan Name: D10_B10E_Boresight_1600m_Q780

30° On-station Time: 1530 UTC / 0930 L

Additional Considerations: No recent snowfall, clear roofs required.

Flyority 2

Collection Area: Nominal Runway Survey Flight Plan

Name: D10_N10D_Nominal_Rnwy_v8_Q780

On-Station Time: Daylight – No solar angle restrictions.

Additional Considerations: Runway should not be wet or snow covered.

Flyority 3

Collection Area: NEON HQ Lidar Validation

Flight Plan Name: D10_H10C_HQ_val_v1_Q780

On-Station Time: Daylight – No solar angle restrictions.

Flyority 4

Collection Area: Wiggle Timing Test

Flight Plan Name: D10_W10C_Wiggle_Test_v6_Q780

40° On-station Time: 1640 UTC / 1040 L

Additional Considerations: Runway should not be wet, or snow covered.

Flyority 5

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10B_NIS_Offset_v2_Q780

35° On-station Time: 1600 UTC / 1000 L

Crew: Mitch (Lidar), Matt (NIS)